

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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WRITTEN OPINION

(PCT Rule 66)

Date of mailing
(day/month/year)

28/11/2003

Applicant's or agent's file reference

PC3-015

REPLY DUE

within 1 / 00 months/days
from the above date of mailing

International application No.

PCT/US 03/ 03962

International filing date (day/month/year)

11/02/2003

Priority date (day/month/year)

14/02/2002

International Patent Classification (IPC) or both national classification and IPC

C07C17/386

Applicant

PCBU SERVICES, INC.

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 14/06/2004

Name and mailing address of the IPEA/



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Examiner

Formalities officer
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Form PCT/IPEA/408 (cover sheet) (march 2002)

WRITTEN OPINION

International application No. PCT/ US 03/ 03962

I. Basis of the opinion

1. The basis of this written opinion is the application as originally filed.

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability

1. In light of the documents cited in the international search report, it is considered that the invention as defined in at least some of the claims does not appear to meet the criteria mentioned in Article 33(1) PCT, i.e. does not appear to be novel and/or to involve an inventive step (see international search report, in particular the documents cited X and/or Y and corresponding claims references).
2. If amendments are filed, the applicant should comply with the requirements of Rule 66.8 PCT and indicate the basis of the amendments in the documents of the application as originally filed (Article 34 (2) (b) PCT) otherwise these amendments may not be taken into consideration for the establishment of the international preliminary examination report. The attention of the applicant is drawn to the fact that if the application contains an unnecessary plurality of independent claims, no examination of any of the claims will be carried out.



NB: Should the applicant decide to request detailed substantive examination, then an international preliminary examination report will normally be established directly. Exceptionally the examiner may draw up a second written opinion, should this be explicitly requested.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC3-015	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/US 03/03962	International filing date (day/month/year) 11.02.2003	Priority date (day/month/year) 14.02.2002
International Patent Classification (IPC) or both national classification and IPC C07C17/386		
Applicant PCBU SERVICES, INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 5 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 26.08.2003	Date of completion of this report 26.03.2004	
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Breimaier, W Telephone No. +49 89 2399-8327 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/US 03/03962****I. Basis of the report**

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-4, 6-19 as originally filed
5 received on 13.02.2004 with letter of 01.02.2004

Claims, Numbers

1-22 received on 13.02.2004 with letter of 01.02.2004

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/US 03/03962****V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement****1. Statement**

Novelty (N)	Yes: Claims	1-22
	No: Claims	
Inventive step (IS)	Yes: Claims	1-22
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

2. Citations and explanations**see separate sheet**

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US03/03962

Re Item V**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

The subject-matter according to claims 1 to 22 is novel and inventive in the sense of art. 33(2)(3) PCT.

None of the available prior art documents disclose a process for recovering pentafluoroethane from a mixture comprising pentafluoroethane and chloropentafluoroethane with hexafluoropropene (see claim 1) or chlorotrifluoroethene (see claim 12) as the extracting agent.

WO 96/245692 (see page 4, lines 1 to 10, claim 1) utilizes perchloroethylene as the extracting agent and according to the process of GB-A 1 013 991 (see page 1, lines 77 to 86, page 2, lines 1 to 6, claims 1 and 4) trifluoromethane and tetrafluoroethylene has been separated from each other in the presence of hexafluoropropene.

In view of the closest state of the art as cited on present page 3, lines 8 to 12, the problem posed is the provision of an alternative process for the recovery of pentafluoroethane. This is solved by the process as claimed which uses hexafluoropropene or chlorotrifluoroethene as extracting agents (see examples 1 and 2, in particular table I). In the absence of any indication in the available prior art which would have led the skilled person to the present solution, namely to separate a mixture comprising pentafluoroethane and chloropentafluoroethane in the presence of hexafluoropropene or chlorotrifluoroethene, the present subject-matter is not only novel but also inventive.

In addition, the following is noted:

- Claims 8 and 19 do not describe a further technical process feature and are therefore considered to be superfluous.
- In claim 20, line 14, the compound is "chlorotrifluoroethene" and not "hexafluoropropene".



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FACSIMILE COVER PAGETO: Virginia ManoharanFAX NO: 1 571 273 1450FROM: Wells St. John P.S.DATE: April 6, 2005NO. OF PAGES: 12OUR FILE: PC3-007YOUR FILE: 10/075,560SUBJECT/MESSAGE:

Further to our phone call, please find attached, Written Opinion and International Preliminary Examination Report in PCT/US03/03962.

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